

What is claimed is:

1. An electric actuator having a moving mechanism  
movable by drive power from an electric drive source,  
5 comprising:

at least one positioning mechanism for adjusting  
relative stop positions of a start point and an end point  
for the moving mechanism;

10 a positional information detector for detecting  
positional information of said moving mechanism between said  
start point and said end point;

at least one of a speed regulator for setting a speed  
in constant-speed movement of said moving mechanism and an  
acceleration regulator for setting an acceleration in  
15 accelerated movement of said moving mechanism;

a control console having a learning device for learning  
a distance that said moving mechanism travels between said  
start point and said end point; and

20 a learning manipulation element for operating said  
learning device;

wherein a stop position for said moving mechanism is  
set by positionally adjusting said positioning mechanism,  
said learning device learns the distance that said moving  
mechanism travels according to a command from said control  
25 console in response to a manipulation of said learning  
manipulation element, and at least one of the speed in  
constant-speed movement of said moving mechanism and the

acceleration in accelerated movement of said moving mechanism is set by manipulation of said speed regulator or said acceleration regulator;

5 wherein said control console outputs a drive signal to said electric drive source to move said moving mechanism based on the positional information from said positional information detector , at least one of the speed set by said speed regulator and the acceleration set by said acceleration regulator, and the distance that said moving  
10 mechanism travels which is learned by said learning device and when said moving mechanism is to reach said start point or said end point, said control console controls said moving mechanism to move at a speed lower than said speed in constant-speed movement and be positioned at said start  
15 point or said end point.

2. An electric actuator according to claim 1, wherein said electric drive source comprises a stepping motor or one of a DC motor, an AC motor, and a linear motor.

20 3. An electric actuator according to claim 1, wherein said positioning mechanism includes a shock absorber for damping shocks produced when said moving mechanism abuts against said positioning mechanism.

25 4. An electric actuator according to claim 1, wherein said moving mechanism comprises a turntable rotatably

mounted on said electric drive source.

5        5. An electric actuator according to claim 1, wherein  
said positioning mechanism is a rod slidably supported by a  
guide mechanism.

      6. An electric actuator according to claim 5, wherein  
said positioning mechanism is disposed outside of said guide  
mechanism.

10        7. A method of controlling an electric actuator having  
a moving mechanism movable by drive power from an electric  
drive source through a drive power transmitting mechanism,  
said electric actuator including at least one positioning  
15        mechanism for adjusting relative stop positions of a start  
point and an end point for the moving mechanism, a  
positional information detector for detecting positional  
information of said moving mechanism, at least one of a  
speed regulator for setting a speed in constant-speed  
20        movement of said moving mechanism and an acceleration  
regulator for setting an acceleration in accelerated  
movement of said moving mechanism, a control console having  
a learning device, for learning a distance that said moving  
mechanism travels between said start point and said end  
25        point, and a learning manipulation element for operating  
said learning device, said method comprising the steps of:  
      setting a stop position for said moving mechanism by

positionally adjusting said positioning mechanism;

learning the distance that said moving mechanism travels with said learning device according to a command from said control console in response to a manipulation of said learning manipulation element; and

setting at least one of the speed in constant-speed movement of said moving mechanism and the acceleration in accelerated movement of said moving mechanism by manipulating said speed regulator or said acceleration regulator;

wherein said control console outputs a drive signal to said electric drive source to move said moving mechanism based on the positional information from said positional information detector, at least one of the speed set by said speed regulator and the acceleration set by said acceleration regulator, and the distance that said moving mechanism travels which is learned by said learning device and when said moving mechanism is to reach said start point or said end point, said control console controls said moving mechanism to move at a speed lower than said speed in constant-speed movement and be positioned at said start point or said end point.

8. A method according to claim 7, wherein said moving mechanism is stopped at an intermediate point between said start point and said end point according to a command from said control console based on the positional information

from said positional information detector.

5           9. A method according to claim 7, wherein said control  
console monitors the distance that said moving mechanism  
travels which is calculated based on the positional  
information from said positional information detector and  
the speed of said moving mechanism, and limits a drive  
signal output to said electric drive source after said  
moving mechanism reaches said start point or said end point  
10 if the monitored distance that said moving mechanism travels  
is judged as reaching the distance learned by said learning  
device or if the monitored distance that said moving  
mechanism travels is judged as not reaching the distance  
learned by said learning device and the speed of said moving  
15 mechanism is equal to or lower than a predetermined speed.

20           10. A method according to claim 7, wherein said  
electric drive source comprises a motor, and said control  
console monitors the distance that said moving mechanism  
travels which is calculated based on the positional  
information from said positional information detector, and  
resets a deviation between said drive signal and the  
monitored distance that said moving mechanism travels if  
said deviation exceeds a predetermined range after said  
25 moving mechanism reaches said start point or said end point.

11. A method according to claim 7, wherein said

electric drive source comprises a motor, and said control console rotates said motor alternately in a normal direction and a reverse direction under open-loop control to synchronize the positional information from said positional information detector and positional information corresponding to a rotational angle of said motor with each other when a power supply of said electric actuator is turned on.

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